FIG.1

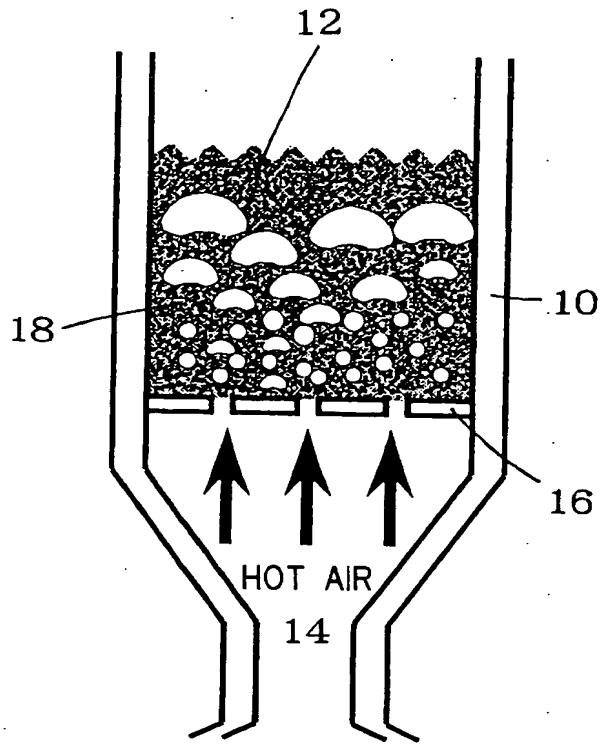


FIG.2

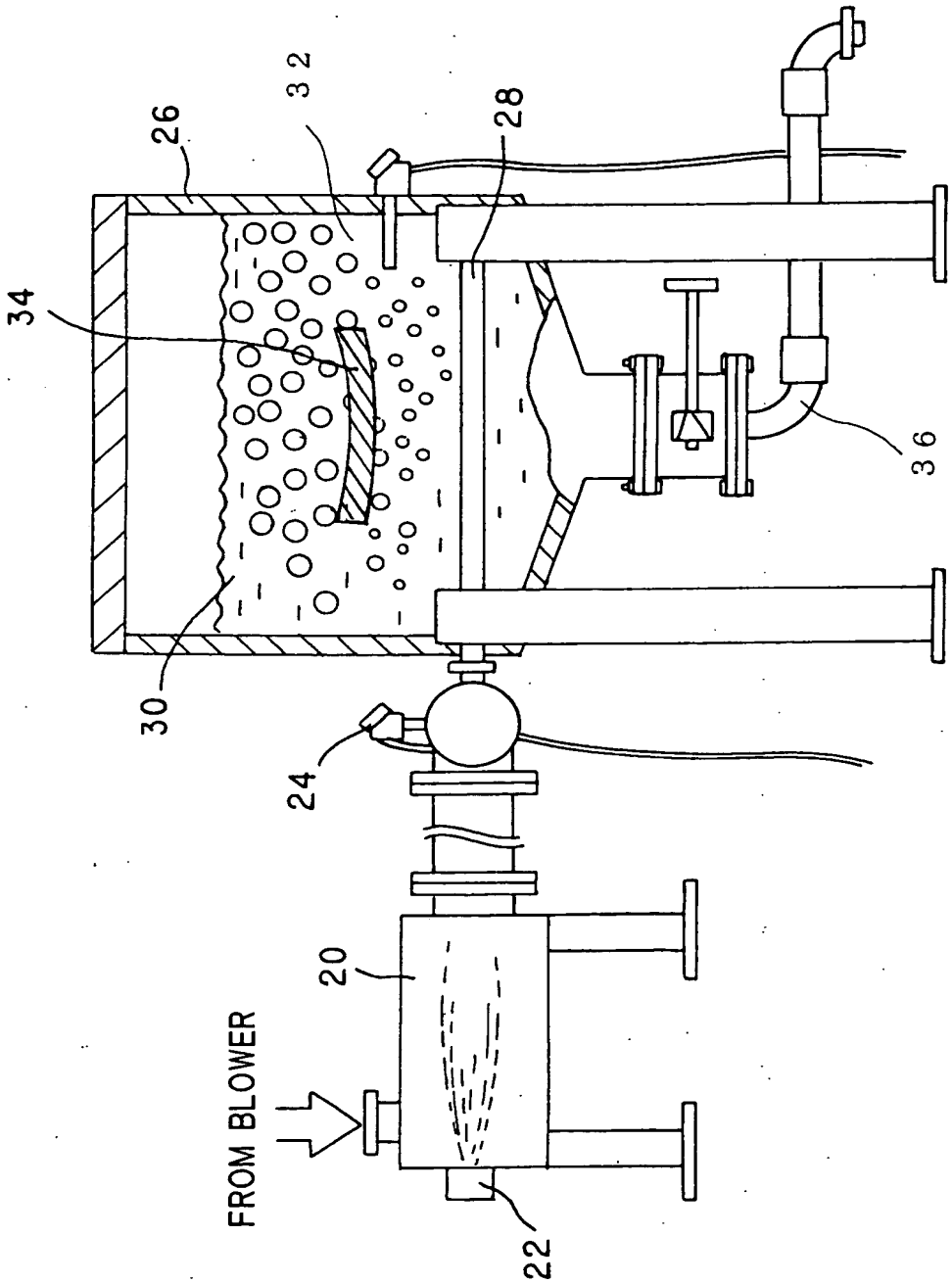


FIG.3

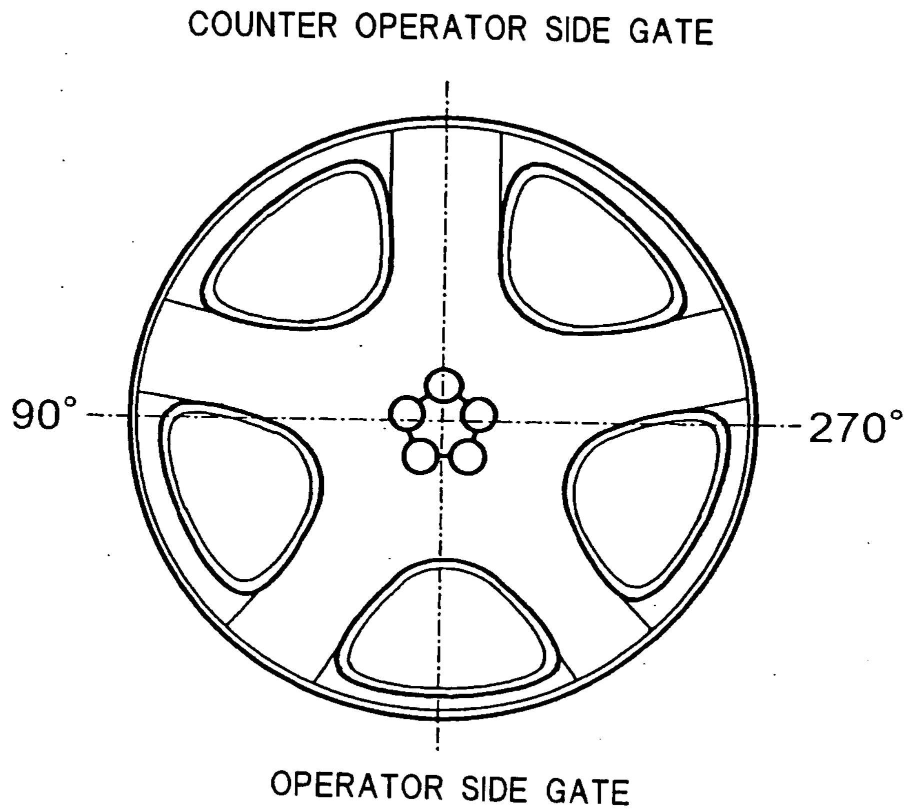


FIG. 4

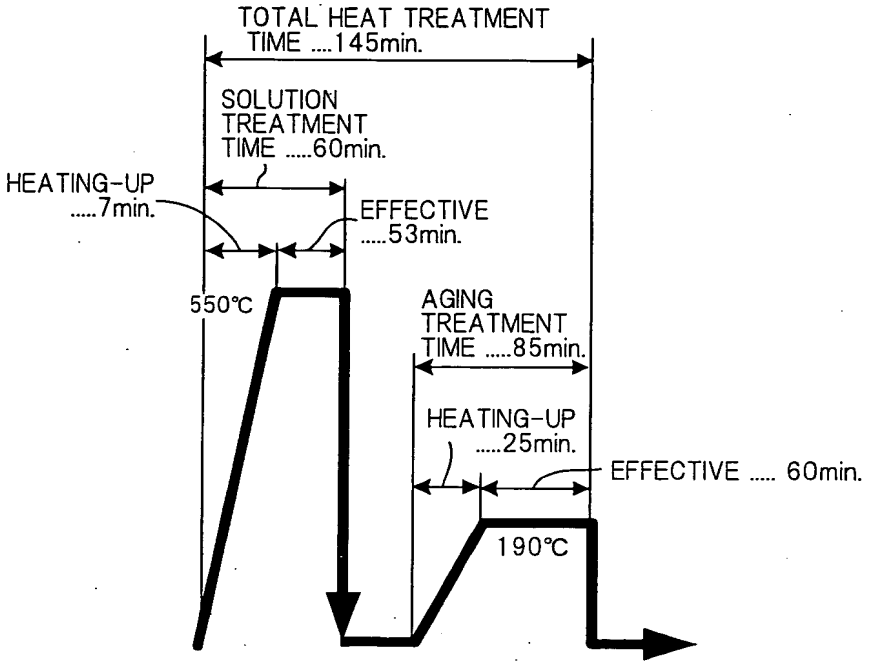

TOTAL HEAT TREATMENT
TIME ....145min.
SOLUTION
TREATMENT
TIME .....60min.
HEATING-UP
.....7min.
EFFECTIVE
.....53min.
550℃
AGING
TREATMENT
TIME .....85min.
HEATING-UP
.....25min.
EFFECTIVE ..... 60min.
190℃

FIG.5

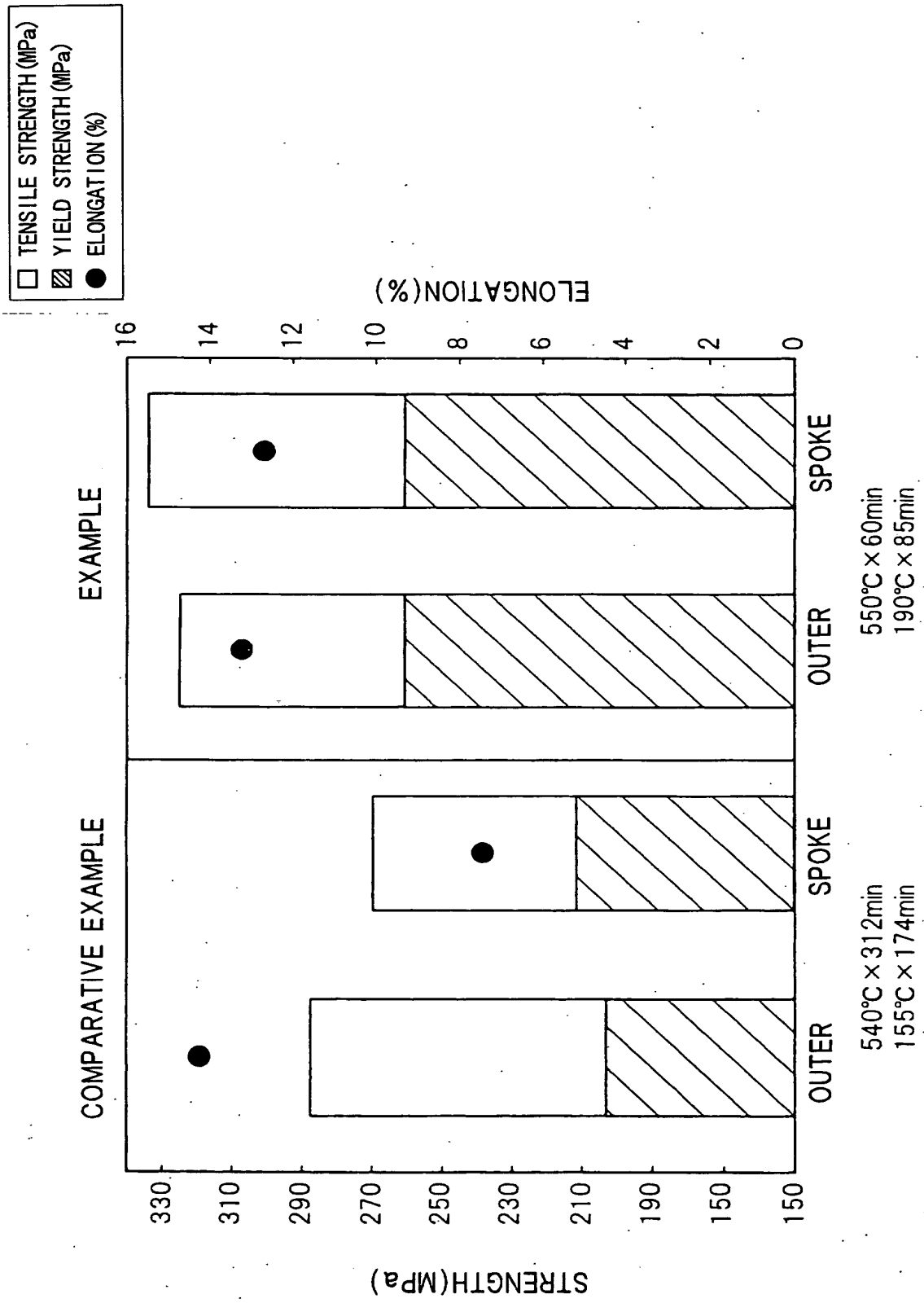

TENSILE STRENGTH (MPa)
YIELD STRENGTH (MPa)
ELONGATION (%)
STRENGTH (MPa)
ELONGATION (%)
330
310
290
270
250
230
210
190
150
16
14
12
10
8
6
4
2
0
COMPARATIVE EXAMPLE
EXAMPLE
OUTER
SPOKE
OUTER
SPOKE
540°C × 312min
155°C × 174min
550°C × 60min
190°C × 85min

FIG.6

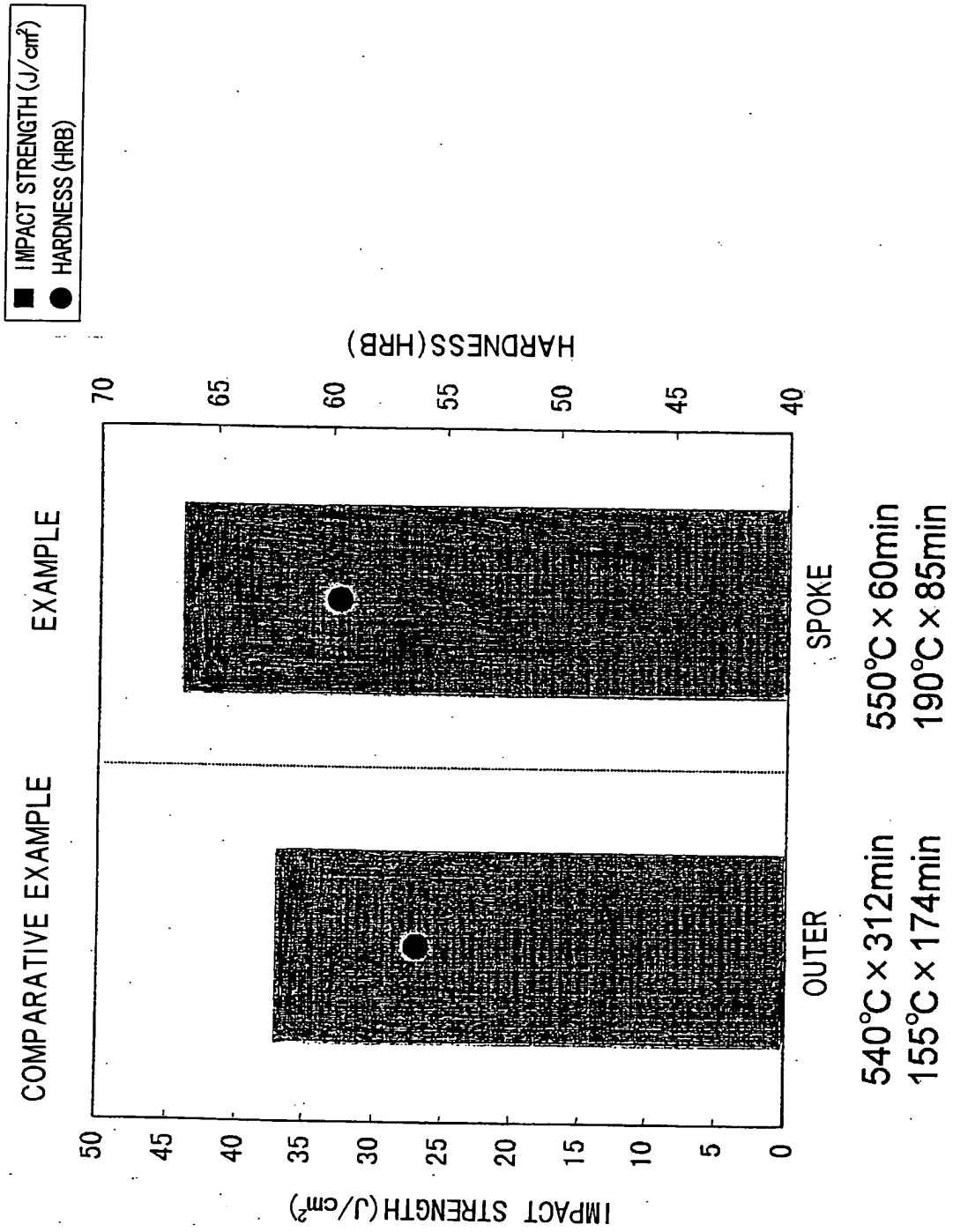
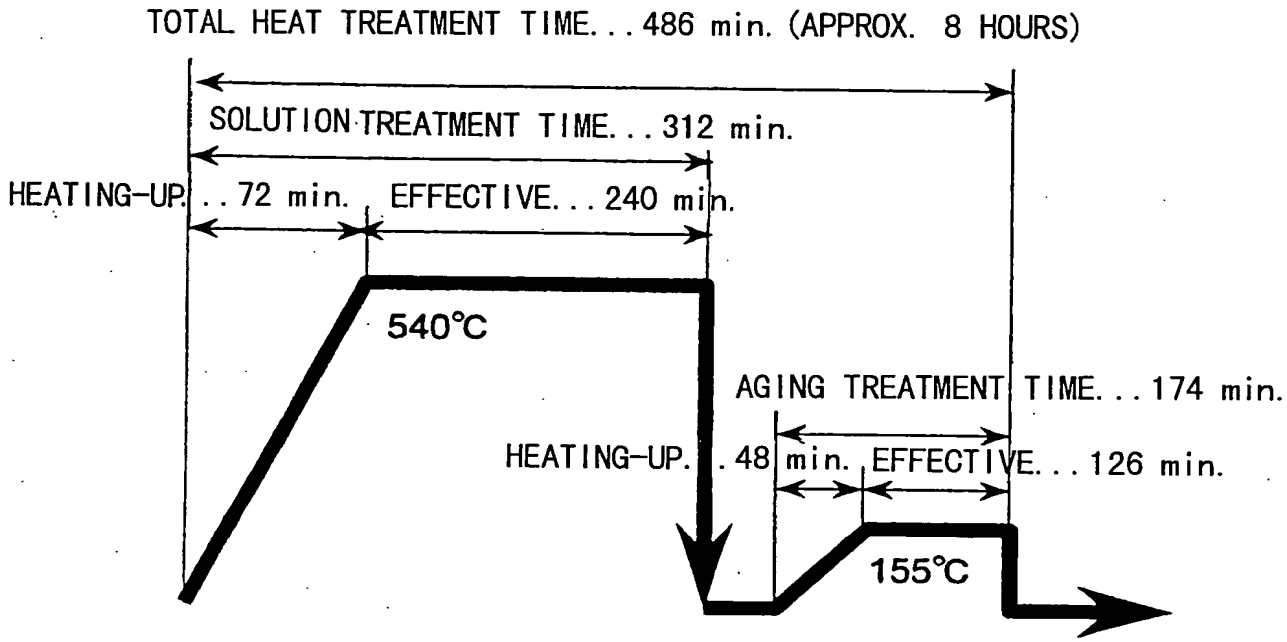

IMPACT STRENGTH (J/cm²)
HARDNESS (HRB)
IMPACT STRENGTH (J/cm²)
HARDNESS (HRB)
0
5
10
15
20
25
30
35
40
45
50
40
45
50
55
60
65
70
COMPARATIVE EXAMPLE
EXAMPLE
OUTER
SPOKE
540°C × 312min
155°C × 174min
550°C × 60min
190°C × 85min

FIG.7


TOTAL HEAT TREATMENT TIME...486 min. (APPROX. 8 HOURS)
SOLUTION TREATMENT TIME...312 min.
HEATING-UP...72 min.
EFFECTIVE...240 min.
540℃
AGING TREATMENT TIME...174 min.
HEATING-UP...48 min.
EFFECTIVE...126 min.
155℃